

CLAIMS

1. A computer-executable method, comprising:
determining if a child window of a parent window is a legacy window;
if so, causing the child window output to be redirected to an off-screen
buffer;
retrieving the child window output from the off-screen buffer;
applying a visual enhancement to the child window output; and
composing a visual representation of the parent window with the visually
enhanced child window output.

2. The method recited in claim 1, wherein the legacy window is
configured to be administered by a legacy display component having fewer visual
enhancements than a Media Integration Layer (MIL) component.

3. The method recited in claim 2, wherein causing the child window
output to be redirected comprises instructing the legacy display component to
redirect the child window output to the off-screen buffer.

4. The method recited in claim 3, wherein the legacy display component
comprises a user subcomponent and a Graphics Device Interface subcomponent.

1 5. The method recited in claim 1, wherein the visual enhancement
2 comprises a selected one or more from a group comprising re-sizing, re-shaping,
3 relocating window component output, applying transparency, rotating and
4 translating window component output, and applying a texture or visual effect to
5 the window component output.

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7 6. The method recited in claim 1, wherein the visual enhancement
8 comprises scaling the child window output to reflect a different screen resolution
9 than originally applicable.

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11 7. The method recited in claim 1, wherein composing the visual
12 representation of the parent window is performed by the MIL component.

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14 8. A computer-readable medium having computer-executable
15 instructions for performing the method recited in claim 1.

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2 **9.** A computer-executable method, comprising:

3 receiving a notification that an input event occurred, the input event
4 including a location on a screen display, the location being within a boundary of a
5 parent window, the parent window being compatible with a MIL component;

6 determining where on the parent window the input event occurred by:

7 evaluating the notification to identify which of a plurality of
8 windows corresponds to the location;

9 if the location is within a boundary of a non-legacy child window,
10 evaluating where on the non-legacy child window the input event occurred;

11 if the location is within a boundary of a legacy child window, the
12 child window being a legacy window that does not have native capability to
13 interact with the MIL component, referring the notification to a legacy
14 display component; and

15 notifying an appropriate child window of the input event, the
16 appropriate child window corresponding to the location.

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18 **10.** The method recited in claim 9, further comprising:

19 receiving a notification that the input event occurred within a boundary of
20 a second child window, the second child window being a child of the first child
21 window, and repeating the determination step for the first child window.

1 **11.** The method recited in claim 9, wherein evaluating the notification
2 comprises evaluating data structures associated with the MIL component that
3 describe relationships between the parent window and a plurality of child windows
4 on the parent window.

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6 **12.** The method recited in claim 11, wherein the data structures do not
7 include information about other windows that are legacy children of legacy child
8 windows on the parent window.

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10 **13.** The method recited in claim 11, wherein the data structures include
11 information about other windows that are non-legacy children of legacy child
12 windows on the parent window.

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14 **14.** The method recited in claim 9, wherein the determining step is a
15 cooperative process between the MIL component and the legacy display
16 component.

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18 **15.** The method recited in claim 14, wherein the legacy display
19 component maintains information about the layout of legacy child windows, and
20 wherein the MIL component maintains information about the layout of non-legacy
21 child windows.

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23 **16.** A computer-readable medium having computer-executable
24 instructions for performing the method recited in claim 9.

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2 **17.** A computer-executable medium having computer executable
3 components, comprising

4 a user component configured to create an off-screen buffer upon detecting
5 the presence of a legacy child window of a parent window;

6 a GDI component configured to redirect window output from the legacy
7 child window upon being notified by the user component of the existence of the
8 legacy child window; and

9 a MIL component configured to apply a visual enhancement to the
10 redirected window output in connection with composing the parent window for
11 display on a display device.

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13 **18.** The method recited in claim 17, wherein the user component
14 maintains data structures that describe a layout and position of the legacy child
15 window and its legacy children.

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17 **19.** The method recited in claim 17, wherein the MIL component
18 maintains data structures that describe a layout and position of the parent window
19 and its children.

1 **20.** The method recited in claim 19, wherein the visual enhancement is
2 at least one of a plurality of visual enhancements comprising re-sizing, re-shaping,
3 relocating window component output, applying transparency, rotating and
4 translating window component output, applying a texture or visual effect to the
5 window component output, and scaling the legacy child window output to reflect a
6 different screen resolution than originally applicable.

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8 **21.** The method recited in claim 17, wherein the MIL component is
9 further configured to interact with the user component and the GDI component to
10 identify a location on a child window of the parent window corresponding to a
11 location of an input event.

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2 **22.** A computer-readable medium having computer executable
3 instructions comprising:

4 in a system having a display component for issuing instructions to notify a
5 parent window of the creation of a redirected child window, means for notifying
6 the parent window that the redirected child window is being or has been set up.
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8 **23.** The computer-readable medium recited in claim 22, wherein the
9 means for notifying the parent comprises a window message indicating that the
10 redirected child window is being created.
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12 **24.** The computer-readable medium recited in claim 23, wherein the
13 window message includes a window handle to the redirected child window.
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15 **25.** The computer-readable medium recited in claim 22, wherein the
16 means for notifying the parent comprises a window message indicating that the
17 redirected child window is about to be shown.
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19 **26.** The computer-readable medium recited in claim 25, wherein the
20 window message includes a window handle to the redirected child window.
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2 **27.** A computer-readable medium having computer executable
3 instructions comprising:

4 in a system having a display component for issuing instructions to notify a
5 parent window of the creation of a redirected child window, means for notifying
6 the parent window of a change that affects the redirected child window.

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8 **28.** The computer-readable medium recited in claim 27, wherein the
9 means for notifying the parent comprises a window message indicating that the
10 redirected child window has been updated.

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12 **29.** The computer-readable medium recited in claim 28, wherein the
13 window message further comprises information that describes the change to the
14 redirected child window.

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16 **30.** The computer-readable medium recited in claim 27, wherein the
17 means for notifying the parent comprises a window message indicating that the
18 redirected child window has experienced a change in z-order.

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20 **31.** The computer-readable medium recited in claim 30, wherein the
21 window message further comprises a handle to a previous window in the z-order.

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23 **32.** The computer-readable medium recited in claim 27, wherein the
24 means for notifying the parent comprises a window message indicating that the
25 redirected child window has been destroyed.